although many fields were saved by a dense fog. A clipping referring to the frost on the 15th in Vermont states: "In the hill towns the usual peculiarity of such cold waves was observed; the freeze went in streaks, in some cases the apple blossoms were unmistakably frozen, while perhaps only a few rods away the blooms appeared to be uninjured.

North Carolina.—During the first eighteen days of May the temperature was generally above the normal; a cold wave followed on the 20th, preceded by snow in the mountains, which lowered the temperature below 32 at several stations in the western district, with considerable injury to the crops. The remainder of the month was generally cool and unfavorable to the rapid growth of vegetation.

North Dakota.—The temperature was about the average for the month, the frosts were light and no injurious effects have been reported. Generally speaking the outlook for the farmers is good, particularly in the northern and eastern parts.

Oklahoma.—Light frosts occurred throughout the Territory on the mornings of the 19th and 20th, damaging corn, cotton, and tender vegetation slightly on low lands and creek bottoms. Wheat harvest, by the close of the month, had begun in a few fields; grain ripening unusually early. The outlook is favorable for a good average wheat crop; large corn crop; oats short; cotton, potatoes, grass, vegetables, and small fruits excellent.

South Carolina.—From the 1st to the 19th the month was favorable for agricultural interests. After the 19th the conditions were adverse, principally on account of a cool wave that carried the temperature as low or lower than ever before recorded during the latter part of May in this State. Light frosts were noticed on the mornings of the 20th and 21st over the greater part of the State, and vegetation suffered severely, especially the more tender varieties, such as cotton and the various cultivated vines, not so much from the frost as from the prevailing cool nights.

South Dakota.—Frosts sufficiently heavy to kill delicate vines and cut field crops occurred in different portions of the State during the whole month. The most general killing frost over the eastern portion of the State occurred on the 19th.

Tennessee.—A cool wave passed over the State on the 18th, causing light frosts in some of the western counties, but no damage was done to crops aside from temporarily retarding their growth. Covington: Growing crops damaged by unseasonably cold weather. Lynnville: A cold wave struck us on the morning of the 18th and lasted until the end of the month; much damage was done to tender vegetation; nearly all the apples are falling from the trees. Nunnelly: The latter portion of the month has been very cold, and vegetation has suffered greatly therefrom.

Texas.—Except for the hail in a few localities the weather was generally favorable for cotton, which was in good condition generally. Maize was blooming or tasseling over the northern portion of the State by the 22d, and the prospects for a good crop continue promising. Early sown oats were beginning to ripen over the southern portions of the State by the 31st.

Washington.—Vegetation made good growth, and, with the exception of the prune and cherry crops, which were injured by frosts in some of the western counties, this year's crops are in a very promising condition in all districts not affected by the inundations.

West Virginia.—Killing frost on the 29th, injurious to tender garden truck. Crops did not make satisfactory growth during the month, the conditions on the average being unfavorable, melons and corn being the most seriously affected.

Wisconsin.—Fond du Lac: The frosts of the 19th and 20th did much damage to strawberries and small fruits, and some injury to early corn and potatoes. Harvey: At the end of the month it was found that fruit was not so badly hurt as at first supposed; small grains looking excellent.

PRECIPITATION.

[*In inches and hundredths.*]

The distribution of precipitation for the month of May, 1894, as determined by reports from about 2,000 stations, is exhibited on Chart III. The numerical details are also given in Tables I, II, and III; the first of these gives the average departures from the normal for each district, whereas the average departure for each State is given in the chapter on State Weather Services.

NORMAL PRECIPITATION FOR MAY.

The normal precipitation for the month of May is less than 1 in the southern plateau and the southern Pacific regions; it is from 1 to 2 over the middle Pacific, northern, and middle plateau; from 2 to 3 in the North Dakota, northern slope, and north Pacific regions; from 3 to 4 in New England, middle Atlantic, Key West, and Ohio Valley regions; from 4 to 5 in the lower Lake, upper Lake, south Atlantic, east Gulf, and west Gulf regions.

PRECIPITATION FOR CURRENT MONTH.

The total precipitation for May exceeded 6 in the southern slope, or Abilene region, and exceeded 5 in the middle Atlantic and lower Lake region. Areas of 8 to 10 occurred in Arkansas, Michigan, and Pennsylvania.

CURRENT DEPARTURES FROM NORMAL PRECIPITATION.

The precipitation for May was most decidedly in excess of the normal in Pennsylvania, being 6.5 above the average at Philadelphia and still more in the interior of the State. The principal region of excess covered the middle Atlantic and Eastern States, the lower Lake region, Michigan, Ohio, Indiana, and Kentucky, and portions of Wisconsin and Minnesota; a slight excess prevailed in northern California; the principal region of deficit was in the eastern Gulf States, the upper Mississippi and lower Missouri valleys. A maximum deficit of 4.4 occurred at Titusville and an excess of 4.1 at Tampa, on opposite sides of the Florida Peninsula.

The following table shows for certain stations, as reported by voluntary observers, the normal and extreme total precipitation for this month:

State and station.	(1) Average for the month of May.	(2) Length of record.	(3) Total for May, 1894.	(4) Departure from average.	(5) Extremes for May.			
					Greatest.		Least.	
					Amt.	Year.	Amt.	Year.
Arizona.	*Inches.*	*Years*	*Inches.*	*Inches.*	*Inches.*		*Inches*	
Fort Apache	0.56	18	0.79	+ 0.23	2.18	1893	0.00	*
Whipple Barracks	0.60	23	0.23	— 0.37	1.82	1877	0.00	*
Arkansas.								
Keesees Ferry	6.09	12	9.41	+ 3.32	10.56	1882	1.97	1891
California.								
Riverside	0.39	13	0.26	— 0.13	1.99	1884	0.00	1886, '93
Colorado.								
Las Animas	1.82	12	1.20	— 0.62	5.06	1882	0.09	1893
Florida.								
Merritts Island	3.88	16	0.74	— 3.14	11.58	1890	0.74	1894
Georgia.								
Forsyth	3.27	20	3.56	+ 0.39	7.31	1890	0.45	1877
Idaho.								
Boise Barracks	1.41	20	2.08	+ 0.67	3.51	1892	0.07	1881
Fort Sherman	1.87	11	.....	.....	3.75	1893	0.66	1884
Indiana.								
Lafayette	4.81	14	5.16	+ 0.35	8.79	1892	1.98	1891
Iowa.								
Cresco	3.47	22	2.63	— 0.84	7.89	1880	0.76	1874
Kansas.								
Independence	4.67	22	3.71	— 0.96	10.64	1892	0.92	1879
Salina	4.10	10	3.02	— 1.08	8.92	1889	0.27	1888
Louisiana.								
Grand Coteau	5.23	11	1.92	— 3.31	14.03	1884	0.21	1889
Maine.								
Orono	3.49	23	3.84	+ 0.35	10.52	1890	1.25	1887
Maryland.								
Cumberland	3.28	22	6.13	+ 2.85	7.13	1890	0.30	1875
Michigan.								
Kalamazoo	4.25	18	8.33	+ 4.08	8.33	1894	1.44	1885
Missouri.								
Sedalia	5.16	15	3.94	— 1.22	10.47	1892	0.97	1879
Montana.								
Fort Custer	2.44	13	1.98	— 0.46	7.29	1893	0.47	1885
Nebraska.								
Fort Robinson	2.92	10	0.79	— 2.13	6.39	1888	0.72	1893
Genoa (near)	4.24	18	1.86	— 2.38	7.80	1877	0.83	1880
Nevada.								
Browns	0.28	22	.....	.....	1.10	1887	0.00	*
Carson City	0.60	16	1.07	+ 0.47	2.80	1891	0.04	1880
New Hampshire.								
Hanover	3.24	23	3.38	+ 0.14	6.26	1892	0.81	1879
New Mexico.								
Fort Wingate	0.52	22	0.02	— 0.50	3.00	1872	0.00	1879
New York.								
Cooperstown	3.67	23	5.29	+ 1.62	8.84	1890	0.36	1879
Plattsburg Barracks	2.58	23	4.14	+ 1.56	5.00	1890	0.18	1879

Departures from average precipitation—Continued.

State and station.	(1) Average for the month of May.	(2) Length of record.	(3) Total for May, 1894.	(4) Departure from average.	(5) Extremes for May.			
					Greatest.		Least.	
					Amt.	Year.	Amt.	Year.
North Carolina.	*Inches.*	*Years*	*Inches.*	*Inches.*	*Inches.*		*Inches*	
Lenoir	4.80	22	3.53	— 1.27	11.50	1873	1.60	1881, '83
Oklahoma.								
Fort Reno	4.00	11	1.30	— 2.70	9.33	1885	0.31	1886
Fort Sill	4.76	22	4.20	— 0.56	9.74	1880	0.07	1886
Fort Supply	3.56	15	5.22	+ 1.66	7.84	1883	0.06	1886
Oregon.								
Bandon	3.50	16	1.55	— 1.95	7.79	1879	0.23	1890
Pennsylvania.								
Dyberry	3.28	21	6.25	+ 2.97	6.25	1894	0.36	1875
Grampian	4.38	22	7.53	+ 3.15	11.60	1889	1.29	1891
Wellsboro	5.26	15	10.23	+ 4.97	10.23	1894	1.30	1891
South Carolina.								
Statesburg	3.63	13	1.46	— 2.17	6.68	1888	1.24	1882
South Dakota.								
Fort Sully	2.63	23	0.25	— 2.38	5.05	1874	0.25	1894
Texas.								
Austin	4.12	18	3.85	— 0.27	8.40	1885	T.	1886
Silver Falls	1.60	8	.....	.....	4.25	1887	0.01	1886
Utah.								
Terrace	0.38	22	0.50	+ 0.12	1.20	1891	0.00	*
Vermont.								
Strafford	3.40	21	4.01	+ 0.61	7.60	1890	0.40	1877
Virginia.								
Dale Enterprise	5.43	14	5.70	+ 0.27	12.66	1886	1.06	1880
Washington.								
Fort Townsend	2.00	20	2.57	+ 0.57	7.81	1875	0.30	1891
West Virginia.								
Parkersburg	3.84	9	3.29	— 0.55	5.87	1893	1.05	1885
Wisconsin.								
Madison	3.67	23	3.36	— 0.31	6.98	1883, '92	1.02	1877
Wyoming.								
Fort Washakie	2.64	11	1.08	— 1.56	5.77	1882	0.41	1887

*Frequently.

Considered by districts the precipitation for May, 1894, when compared with the normal for the month, furnishes the departures given in Table I, as expressed in inches, and also the corresponding following percentages, as found by dividing those departures by the normal precipitation for May (precipitation is in excess when the percentage of the normal exceeds 100):

Deficits: South Atlantic States, 93; east Gulf States, 63; west Gulf States, 45; Ohio Valley and Tennessee, 92; North Dakota, or the extreme northwest, 91; upper Mississippi Valley, 71; Missouri Valley, 42; northern slope, 64; northern plateau, 88; north Pacific, 96.

Excesses: New England States, 112; middle Atlantic States, 150; Key West, 128; lower Lake region, 159; upper Lake region, 160; middle slope, 112; southern slope (Abilene), 151; southern plateau, 163; middle plateau, 100; middle Pacific, 100; south Pacific, 126.

ACCUMULATED PRECIPITATION.

The accumulated departures from normal precipitation from the beginning of the year to the end of May are given in the following table:

Districts.	Deficits.		Districts.	Excesses.	
	Amt.	Per cent.		Amt.	Per cent.
New England	3.80	80	Upper Lake	2.30	119
Middle Atlantic	2.00	89	North Dakota (Ex. NW.)	2.00	134
South Atlantic	5.70	72	Northern slope	0.40	107
Key West	2.90	70	Northern plateau	3.80	143
East Gulf	1.40	94	North Pacific	10.60	136
West Gulf	2.20	89			
Ohio Valley and Tennessee	2.40	89			
Upper Mississippi	1.50	89			
Missouri Valley	2.80	76			
Middle slope	0.40	95			
Southern slope (Abilene)	1.00	92			
Southern plateau	0.30	89			
Middle plateau	0.60	91			
Middle Pacific	2.30	87			
South Pacific	4.60	42			
Lower Lake	0.00	100			

YEARS OF GREATEST PRECIPITATION FOR MAY.

The precipitation for the current month was the greatest on record for the month of May at the regular Weather Bureau stations shown in the following table:

Station.	Current precipitation.		Previous maximum.	
	Amount.	Departure.	Amount.	Year.
Savannah, Ga	5.93	+ 3.0	5.22	*
Baltimore, Md	7.26	+ 3.7	7.07	1886
Philadelphia, Pa	9.46	+ 6.5	5.83	1873
Portland, Me	7.33	+ 4.0	6.46	1884
Vineyard Haven, Mass	4.78	+ 1.7	4.45	1889
Rochester, N. Y	6.87	+ 3.8	6.53	1883
Port Huron, Mich	6.97	+ 3.7	5.69	1883
Alpena, Mich	6.99	+ 2.4	6.56	1876
Grand Haven, Mich	6.35	+ 2.9	6.02	1883
Green Bay, Wis	6.93	+ 4.0	5.18	1890
Marquette, Mich	8.09	+ 5.4	6.60	1872
Abilene, Tex	6.49	+ 2.2	6.12	1892
Colorado Springs, Colo	7.34	+ 4.5	5.90	1874
Port Angeles, Wash	1.96	+ 0.9	1.87	1892

*Frequently.

YEARS OF LEAST PRECIPITATION FOR MAY.

The precipitation for the current month was the least on record for the month of May at the regular Weather Bureau stations shown in the following table:

Station.	Current precipitation.		Previous minimum.	
	Amount.	Departure.	Amount.	Year.
Kansas City, Mo	2.08	—2.2	3.31	1890
Des Moines, Iowa	1.41	—3.6	1.70	1885
Omaha, Nebr	0.61	—3.9	1.24	1874
Huron, S. Dak	0.43	—3.0	0.44	1891
Rapid City, S. Dak	0.72	—3.6	1.72	1891
Valentine, Nebr	0.17	—3.6	1.33	1894
North Platte, Nebr	0.39	—2.6	0.81	1887

EXCESSIVE PRECIPITATION.

The following tables for May, 1894, show, by States, the number of stations reporting total precipitation to equal or exceed 10.00 inches during this month, 2.50 in 24 hours, and 1.00 in 1 hour:

Monthly precipitation to equal or exceed 10.00.

State.	Number of stations.	State.	Number of stations.
Pennsylvania	31	Maryland	1
New Jersey	17	Texas	1
New York	3	Wisconsin	1
Delaware	2		

Daily precipitation to equal or exceed 2.50 *in* 24 *hours.*

State.	Number of stations.	Dates.	State.	Number of stations.	Dates.
Pennsylvania	39	17, 18, 18–19, 19, 19–20, 19–21, 20, 20–21, 20–22, 21, 28.	Louisiana	3	15, 24–25.
			Minnesota	3	15, 15–16, 16.
			Alabama	2	14, 23.
New Jersey	25	18, 19–20, 20, 20–21. 21, 28–29.	California	2	14, 14–15.
			Connecticut	2	19–20.
Missouri	18	4, 4–5, 5, 8–9, 9, 9–10.	Kansas	2	2, 30.
Colorado	16	29, 29–30, 30, 30–31, 31.	New York	2	19–20, 20.
			North Carolina	2	18, 18–19.
Texas	14	8, 9–10, 10, 10–11, 11, 12, 30–31, 31.	Oklahoma	2	30–31.
			South Carolina	2	7–8, 8.
Wisconsin	10	14–15, 15, 15–16, 17–18, 18.	Georgia	1	15.
			Indian Territory	1	9.
Arkansas	6	* 5.	Iowa	1	5.
Maryland	6	5–6, 6, 18–19, 19–20, 20–21.	Maine	1	24–25.
			Mississippi	1	12.
Michigan	4	5–6, 15–16, 16, 17, 17–18.	Montana	1	16.
			New Hampshire	1	29.
Virginia	4	18–19, 19, 19–20, 20.	Ohio	1	6.
Delaware	3	20–21.	West Virginia	1	19.
Florida	3	26, 26–27, 27.			

*April 30–May 1.

Hourly precipitation to equal or exceed 1.00.

State.	Number of stations.	Dates.	State.	Number of stations.	Dates.
Texas	9	8, 9, 11, 12, 30, 31.	Michigan	2	16, 17.
Louisiana	8	12, 13, 14, 15, 16, 24.	Tennessee	2	14.
Minnesota	5	4, 13, 15.	Virginia	2	16.
Ohio	5	6, 15, 17, 26.	Illinois	1	1.
Florida	4	16, 17, 18, 26, 27.	Indiana	1	6.
Georgia	4	12, 14, 29.	Iowa	1	5.
Missouri	4	9, 17, 30.	Maine	1	25.
Arkansas	3	8, 9, 30.	Nebraska	1	8.
Kansas	3	2, 30.	New York	1	18.
Mississippi	3	8, 11, 12.	North Dakota	1	14.
North Carolina	3	17, 18.	Oklahoma	1	4.
South Carolina	3	7, 8, 30.	Pennsylvania	1	18.
Alabama	2	10, 14.	West Virginia	1	26.
Kentucky	2	3, 6.	Wisconsin	1	17.

Excessive precipitation, by stations, for May, 1894.

State and station.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
Alabama.	*Inches.*	*Inches.*		*Inches*	*h. m.*	
Mount Willing		2.60	14			
Newton		4.68	23			
Oxanna				1.23	1 00	14
Wilsonville				1.55	1 30	10
Arkansas.						
Arkadelphia		4.00	*			
Conway				1.20	0 45	30
Dardanelle		3.46	*			
Hot Springs *a*		3.25	*			
Keesees Ferry		2.84	4			
Malvern		5.26	*			
Osceola		3.44	5			
Rogers				1.34	1 20	9
Searcy				1.20	1 15	3
California.						
Campo Seco		2.70	14			
Kennedy Gold Mine		3.46	14-15			
Colorado.						
Canyon		4.31	31			
Castle Rock		2.84	30			
Colorado Springs		3.00	29-30			
Dumont		2.65	31			
Glen Eyrie		3.13	30			
Gold Hill		5.25	30-31			
Hugo (near)		2.70	30-31			
Lake Moraine		5.50	29-30			
Moraine		3.30	30-31			
Pikes Peak		4.57	29-30			
River Bend		3.00	30-31			
Rocky Ford		3.50	29-31			
Smoky Hill Mine		3.00	31			
Springfield		4.00	29			
Sunnyside		4.65	29-30			
Ward District		6.80	30-31			
Connecticut.						
Canton		2.52	20			
West Simsbury		2.70	19-20			
Delaware.						
Milford		2.55	20-21			
Newark	12.67	4.34	20-21			
Wilmington	11.99	6.99	20-21			
Florida.						
Brooksville				1.08	0 25	16
Do				1.09	1 00	17
Key West		3.47	27	2.65	2 00	27
Orlando				1.13	0 40	18
Tampa		2.82	26-27	2.80	2 35	26
Tarpon Springs		4.07	26			
Georgia.						
Brag		3.33	15			
Canton				1.64	1 05	14
Fleming				1.18	1 00	29
Poulan				1.01	0 30	12
Reynolds				1.72	0 45	14
Illinois.						
Peoria *b*				1.03	1 00	1
Indiana.						
Mount Vernon				2.06	1 00	6
Indian Territory.						
Kemp		2.54	9			
Iowa.						
Cedar Falls				1.00	0 30	5
Clinton		2.50	5			
Kansas.						
Concordia				1.50	0 30	30
Eureka Ranch		5.10	2	5.10	5 00	2
Wakefield		2.65	30	2.65	1 50	30
Kentucky.						
Edmonton				1.35	1 00	6
Paducah *b*				1.28	1 00	3
Louisiana.						
Donaldsonville				1.57	0 45	14
Franklin		2.53	24-25			
Houma				2.00	0 30	15

Excessive precipitation—Continued.

State and station.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
Louisiana—Continued.	*Inches.*	*Inches.*		*Inches*	*h. m.*	
Jeanerette		2.73	15	2.73	1 00	15
Lawrence				2.15	0 55	16
Melville		2.50	15			
Oxford				1.18	1 00	12
Paincourtville				1.06	1 00	24
Rayne				1.08	0 30	13
Sugar Experimental Station				1.36	0 45	16
Maine.						
Portland		2.82	24-25	1.16	1 00	25
Maryland.						
Bachmans Valley		3.45	20-21			
Darlington		3.40	19-20			
Fallston	10.41	3.42	5-6			
Do		4.14	20-21			
Frederick		4.56	6			
New Market		3.00	6			
Taneytown		2.90	18-19			
Michigan.						
Birmingham		3.03	5-6			
Harrisville		2.50	16			
Marquette				1.15	1 00	16
Northport		2.50	15-16			
Parkville		2.68	15-16			
Port Huron		2.99	17-18	1.14	0 30	17
Rawsonville		2.60	17			
Minnesota.						
Alexandria				1.12	1 00	15
Bird Island				2.25	0 45	4
Cambridge				2.38	2 00	13
Collegeville		4.16	16			
Long Prairie				1.35	1 15	13
Milan				1.42	1 03	15
St. Cloud		5.00	15-16			
St. Paul		2.98	15	1.13	1 00	15
Mississippi.						
Hazlehurst		3.00	12			
Vicksburg				1.60	1 00	11
Do				1.46	0 45	12
Waynesboro *b*				1.41	1 00	8
Missouri.						
Appleton City		2.53	5			
Arthur		2.54	5			
Do		3.09	9-10			
Boonville		2.90	9-10			
East Lynne		2.59	5			
Edge Hill		3.38	5			
Ironton		3.60	4-5			
Lamar		2.66	4			
Louisiana Bridge		2.98	9-10			
McCune		3.58	9-10			
Neosho		4.20	4-5			
New Hartford		2.50	9-10			
New Palestine				1.00	0 20	9
Olden		3.95	4-5			
Osceola		3.57	5			
Oto		3.25	5			
St. Louis				1.10	1 00	17
Springfield		2.51	4-5			
Stellada		2.54	4-5			
Vermont		3.38	8-9			
Virgil City				1.05	1 00	30
Wheatland		3.27	5			
Do		2.81	9	2.81	2 30	9
Montana.						
Miles City		2.51	16			
Nebraska.						
Creighton				1.64	1 00	8
New Hampshire.						
North Conway		2.80	29			
New Jersey.						
Beverly	10.47	4.06	20-21			
Billingsport	10.07	4.06	21			
Bridgeton	15.01	3.45	18			
Do		4.45	19-20			
Camden	12.38	4.30	20-21			
Cape May		4.31	20-21			
Cape May C. H		2.87	20-21			
Charlotteburg		3.24	28-29			
Egg Harbor City	10.78	5.29	20-21			
Franklinville	12.63	5.10	20-21			
Freehold		2.57	20-21			
Friesburg	12.14	3.30	20-21			
Hammonton	13.58	5.47	20-21			
Imlaystown		3.60	20-21			
Junction		2.80	20-21			
Lambertville	10.91					
Millville	12.16	3.91	20-21			
Moorestown	12.88	5.81	20-21			
Ocean City		3.54	20-21			
Pensauken	11.11	4.22	20-21			
Rancocas	10.66	4.00	20-21			
Ringoes	10.54	3.95	20			
Salem	13.46	3.62	20-21			
Somerville		2.60	20-21			
Trenton	10.75	3.43	20-21			
Vineland	10.39	7.10	20-21			
Woodbine		4.80	20-21			
New York.						
Addison				1.27	1 00	18
Angelica		2.60	19-20			
Arcade	10.05					

Excessive precipitation—Continued.

State and station.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
New York—Continued.	*Inches.*	*Inches.*		*Inches*	*h. m.*	
Eden Center	12.02					
Friendship		2.67	20			
South Canisteo	11.46					
North Carolina.						
Greensboro				1.07	1 00	18
Horse Cove				1.04	0 30	17
Raleigh (W. B.)		3.97	18–19	2.28	0 47	18
Raleigh (V. O.)		3.00	18			
North Dakota.						
Fort Berthold				1.40	0 40	14
Ohio.						
Ashland				1.89	0 30	17
Bloomingburg				1.01	1 00	15
Bucyrus		3.00	6			
Camp Dennison				1.07	1 00	26
Dayton *a*				1.84	0 28	15
Stoutsville				1.00	1 00	6
Oklahoma.						
Buffalo		4.00	30–31			
Fort Supply		2.60	30–31			
Ponca				1.05	1 00	4
Pennsylvania.						
Altoona		3.64	20			
Bloomsburg	10.02					
Browers Lock	12.11	4.42	21			
Cassandra	14.57	3.00	19			
Do		4.13	21			
Coatesville	11.72	8.44	19–21			
Coopersburg	14.73	7.12	20–21			
Do		3.88	28			
Doylestown	11.41	3.97	21			
Du Bois		2.78	20			
East Mauch Chunk	13.66	8.66	20–21			
Emporium		2.92	20			
Forks of Neshaminy	14.80	5.40	21			
Frederick	10.21					
Girardville	12.69	5.76	20–21			
Grampian		3.14	19			
Hamburg	10.31	5.07	20–21			
Hollidaysburg	11.35	3.00	19			
Kennett Square	11.54	7.30	20–21			
Kilmer	10.00					
Lancaster		2.77	20			
Landsdale	14.27	7.40	20–21			
Lebanon		4.64	20–21			
Lewisburg		3.00	19–20			
Ottsville	12.92	5.48	21			
Philadelphia (W. B.)		3.10	20–21			
Philadelphia *b*	12.07	4.55	20–21			
Philadelphia *c*	12.07	4.52	20–21			
Phœnixville	10.60	4.43	21			
Point Pleasant	13.09	4.85	21			
Pottstown	12.26	8.18	20–22			
Quakertown	15.02	5.94	20–21			
Reading	13.34	7.85	20–21			
Seisholtzville	13.06	7.39	20–21			
Selins Grove	10.03	3.39	20–21			
Shinglehouse		2.50	20			
Smethport	11.33	3.25	18	1.90	1 15	18
Smiths Corners	13.09	5.64	21			
Somerset	14.33	6.90	18–19			
State College		2.79	20			
Warren		3.20	17			
Wellsboro	10.23	3.13	18			
West Chester	13.82	9.03	20–21			
Westtown	13.40	7.87	20–21			
South Carolina.						
McCormick				1.40	1 00	7
St. Stephens		3.16	8	3.16	2 15	8
Tatum Station				1.45	1 00	30
Watts		3.37	7–8			
Tennessee.						
Clarksville				1.05	0 30	14
Nunnelly				1.24	0 15	14
Texas.						
Abilene		3.28	9–10	1.62	0 28	31
Arthur City				1.25	1 15	9
Boerne		4.86	10–11			
Camp Eagle Pass		3.45	10–11			
Duval		2.75	10	1.30	0 20	11
Eastland		4.00	8	4.00	2 00	8
Fort Clark		3.73	10–11			
Fort McIntosh		4.00	11			
Fort Ringgold		3.00	10–11			
Gainesville				1.31	1 00	9
Graham	11.67	6.75	30–31	2.00	2 00	30
Haskell		3.22	31			
Hearne				1.00	0 40	12
Hewitt		3.12	12			
Highlands		3.60	30–31	1.90	0 50	8
Kyle		2.75	10			
Rock Springs		3.48	10–11			
Sulphur Springs				1.86	1 20	9
Virginia.						
Dale Enterprise				1.51	1 00	16
Nottoway				1.72	1 00	11
Petersburg		3.46	19			
Richmond *a*		2.64	20			
Riverton		3.38	19–20			
Stephens City		4.65	18–19			

Excessive precipitation—Continued.

State and station.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
West Virginia.	*Inches.*	*Inches.*		*Inches*	*h. m.*	
Bloomery		3.13	19			
Glenville				1.13	0 30	26
Wisconsin.						
Barron		3.00	15			
Beaver Dam		3.00	18			
Cadiz				1.05	1 00	17
Estella		2.80	15–16			
Grantsburg		2.90	14–15			
Juneau		2.86	18			
Menomonie	10.56	4.80	15–16			
Neillsville		3.09	15–16			
Osceola		2.05	15			
Portage		2.88	17–18			
Valley Junction		4.06	15–16			

Excessive precipitation received too late for publication in April, 1894.

Texas.						
Corsicana *a*		6.48	29–30			
Golindo	11.62					
Hewitt	11.15					

* April 30–May 1.

MAXIMUM RAINFALL FROM SELF-REGISTERING GAUGES.

The following table gives the heaviest rainfall during May, 1894, for periods of 5, 10, and 60 minutes, as recorded on self-registering rain gauges at regular stations of the Weather Bureau. This record refers strictly to rainfall. About 37 stations are furnished with self-registering float rain gauges and 6 with the self-registering weighing rain and snow gauge. The float gauge does not record snowfall, and both forms are liable to be interrupted by snow and ice:

Maximum rainfall in one hour or less.

Station.	Maximum rainfall in—					
	5 min.	Date.	10 min.	Date.	1 hour.	Date.
	Inch.		*Inch.*		*Inch.*	
Atlanta, Ga	0.22	18	0.30	18	0.45	18
Baltimore, Md	0.25	6	0.45	23	0.80	23
Bismarck, N. Dak.*						
Boston, Mass	0.15	19	0.21	19	0.28	19
Buffalo, N. Y.*	0.12	17	0.14	17	0.33	19
Cincinnati, Ohio	0.12	6	0.14	6	0.23	6
Chicago, Ill	0.37	1	0.43	1	0.61	1
Cleveland, Ohio	0.26	18	0.33	17	0.66	17
Denver, Colo.*	0.05	22, 23	0.08	22	0.20	22
Detroit, Mich	0.25	27	0.27	22, 27	0.40	27
Dodge City, Kans	0.02	9, 28	0.04	9, 28	0.17	9
Duluth, Minn	0.12	16	0.16	16	0.45	13
Eastport, Me.*	0.14	2	0.23	2	0.23	2
Galveston, Tex	0.05	12	0.08	12	0.08	12
Indianapolis, Ind	0.42	10	0.53	10	0.81	16
Jacksonville, Fla	0.24	30	0.32	30	0.34	30
Jupiter, Fla	0.20	1, 25	0.35	1	0.95	1
Kansas City, Mo	0.17	10	0.25	10	0.45	10
Key West, Fla.†	0.35	27	0.65	27	1.80	27
Memphis, Tenn	0.25	7	0.40	7	0.85	7
Milwaukee, Wis	0.15	17	0.25	17	0.55	17
Nantucket, Mass	0.06	29	0.10	29	0.25	31
Nashville, Tenn	0.32	10	0.45	10	0.49	10
New Orleans, La	0.15	14, 17	0.25	17	0.42	24
New York, N. Y.*	0.09	6	0.12	24	0.21	24
Norfolk, Va	0.30	23	0.35	23, 30	0.54	30
Omaha, Nebr	0.03	9	0.05	9	0.18	9
Philadelphia, Pa	0.30	28	0.45	28	0.67	28
Portland, Me	0.18	25	0.35	25	1.16	25
Rochester, N. Y	0.20	17	0.40	17	0.76	17
St. Louis, Mo.*						
St. Paul, Minn	0.40	15	0.65	15	1.13	15
Salt Lake City, Utah	0.07	22	0.10	22	0.35	22
San Diego, Cal	0.02	15	0.03	15	0.08	15
San Francisco, Cal	0.03	25	0.05	25	0.25	25
Savannah, Ga.*	0.18	10, 18	0.27	10	0.72	18
Seattle, Wash	0.01	15, 20	0.02	15, 20	0.08	15
Vicksburg, Miss	0.45	11	0.85	11	1.60	11
Washington, D. C.*	0.22	5	0.31	5	0.57	6
Wilmington, N. C.*	0.22	19	0.24	19	0.90	15

* Record incomplete.

FREQUENCY OF EXCESSIVE PRECIPITATION SINCE 1871.

The following tables show the number of years for which monthly precipitation to equal or exceed 10.00 inches, daily

precipitation to equal or exceed 2.50 inches, and hourly precipitation to equal or exceed 1.00 inch has been reported at any regular Weather Bureau station in the several States and Territories for May during the last 24 years:

Frequency of excessive monthly precipitation.

State.	No. years noted.	State.	No. years noted.
Texas	15	Maryland	3
Kansas	10	New Jersey	3
Iowa	7	New York	3
Arkansas	7	Pennsylvania	3
Louisiana	7	Wisconsin	3
Missouri	7	Colorado	2
North Carolina	6	The Dakotas	2
Nebraska	5	District of Columbia	2
Mississippi	5	Indiana	2
Florida	4	Maine	2
Georgia	4	Massachusetts	2
South Carolina	4	Montana	2
Virginia	4	New Hampshire	2
Alabama	4	Kentucky	2
Illinois	3	California	2
Michigan	3	Minnesota	1
Ohio	3	Washington	1
Tennessee	3	Delaware	1

Frequency of excessive daily precipitation.

Kansas	20	Colorado	7
Texas	18	Pennsylvania	7
Alabama	14	Minnesota	6
North Carolina	14	Ohio	6
South Carolina	14	Massachusetts	5
Florida	13	Kentucky	4
Illinois	13	Rhode Island	4
Iowa	12	Montana	4
Mississippi	12	Wisconsin	4
Indian Territory	11	Connecticut	4
Louisiana	11	New Jersey	4
Nebraska	10	New York	4
Arkansas	10	Maine	3
Georgia	10	District of Columbia	2
Tennessee	9	California	2
The Dakotas	9	Delaware	2
Maryland	9	New Hampshire	2
Michigan	9	Oregon	1
Missouri	8	Vermont	1
Virginia	8	West Virginia	1
Indiana	7		

Frequency of excessive hourly precipitation.

Kansas	18	Mississippi	5
Texas	14	Virginia	5
Iowa	12	Indian Territory	4
Nebraska	11	Louisiana	4
Florida	10	Kentucky	4
North Carolina	10	Missouri	4
South Carolina	10	Colorado	3
Pennsylvania	8	Michigan	3
Tennessee	8	Minnesota	3
Georgia	8	Massachusetts	2
Ohio	7	Arizona	1
Maryland	6	Montana	1
Indiana	6	Oregon	1
Illinois	5	Vermont	1
The Dakotas	5	Maine	1
Wisconsin	5	New York	1
Alabama	5	West Virginia	1
Arkansas	5		

EXCEPTIONAL PRECIPITATION.

The following tables give exceptionally heavy monthly, daily, and hourly precipitation reported for May by any station, regular or voluntary, and in any year since 1871:

Exceptional monthly precipitation.

Station and state.	Amt.	Year.	Station and state.	Amt.	Year.
	Inches.			*Inches.*	
Melissa, Tex	34.85	1881	Melissa, Tex	21.95	1873
Weatherford, Tex	27.94?	1884			

Exceptional daily precipitation.

Station and state.	Amount.	Date.	Station and state.	Amount.	Date.
	Inches.			*Inches.*	
Helena, Ark. *a*	10.80	27–28, 1893	Helena, Ark. *b*	9.85	26–28, 1893
Wheeler, Ohio	10.47	16–18, 1893	Fort Wallace, Kans.	9.30	22–23, 1874
Columbus, Ga	9.92	22, 1880	Durham, Ark	9.28	1, 1876

Exceptional daily precipitation—Continued.

Station and state.	Amount.	Date.	Station and state.	Amount.	Date.
	Inches.			*Inches.*	
West Chester, Pa	9.03	20–21, 1894	Colebrook, Ohio	5.76	15–17, 1893
New Frankford, Mo	9.00	28–29, 1889	Batesville, Miss	5.75	27, 1893
East Mauch Chunk, Pa.	8.66	20–21, 1894	New Boston, Mo	5.75	25–26, 1893
Coatesville, Pa	8.44	19–21, 1894	Wellsville, Mo	5.73	25–26, 1893
Grampian, Pa	8.37	31, 1889	Dadeville, Mo	5.72	28, 1893
Clarksville, Tex	8.25	10–11, 1874	Ashland, Va	5.70	3, 1893
Pottstown, Pa	8.18	20–22, 1894	Greensburg, Ala	5.67	1, 1893
Hillhouse, Ohio	8.06	16–17, 1893	Smiths Corners, Pa	5.64	21, 1894
Weatherford, Tex	8.00?	21, 1884	Mobile, Ala	5.62	29, 1883
Blue Knob, Pa	7.90	30–31, 1889	Gainesville, Tex	5.61	31, 1892
Lonoke, Ark	7.88	27–28, 1893	Harbor, Ohio	5.60	16–17, 1893
Westtown, Pa	7.87	20–21, 1894	Upper Mattole, Cal	5.59	5–6, 1891
Reading, Pa	7.85	20–21, 1894	Mayport, Fla	5.53	3–4, 1880
Brinkley, Ark	7.65	26–28, 1893	Spartanburg, S. C	5.53	19, 1886
Okolona, Miss	7.50	4, 1887	Hot Springs, Ark	5.52	27–28, 1888
Lansdale, Pa	7.40	20–21, 1894	Mexico, Mo	5.52	25–26, 1893
Seisholtzville, Pa	7.39	20–21, 1894	Ellsworth, N. C	5.50	22, 1880
Shreveport, La	7.37	6, 1876	Clarksville, Tex	5.50	21, 1878
Memphis, Tenn	7.36	26–28, 1893	Cuero, Tex	5.50	29, 1887
Kennett Square, Pa.	7.30	20–21, 1894	Houston, Tex	5.50	3, 1884
Coopersburg, Pa	7.12	20–21, 1894	Friendship, N. Y	5.50	30–31, 1889
Vineland, N. J	7.10	20–21, 1894	Smethport, Pa	5.50	31, 1889
McConnellsburg, Pa.	7.08	31, 1889	Alum Springs, Va	5.50	30–31, 1889
Osceola, Ark	7.04	31, 1893	Ottsville, Pa	5.48	21, 1894
Wilmington, Del	6.99	20–21, 1894	Hammonton, N. J	5.47	20–21, 1894
Somerset, Pa	6.90	18–19, 1894	Shreveport, La	5.45	21, 1884
Columbia, S. C	6.90	20, 1886	Forks of Neshaminy, Pa	5.41	21, 1894
Hypoluxo, Fla	6.89	29–30, 1890	Osage, Iowa	5.40	23–24, 1880
College Station, Tex	6.85	10–11, 1893	Coudersport, Pa	5.40	31, 1889
Ward District, Colo	6.80	30–31, 1894	Barnegat, N. J	5.39	31, 1878
Graham, Tex	6.75	30–31, 1894	Mountain Spring, Tex.	5.38	31, 1892
Charlesville, Pa	6.71	31, 1889	Little Rock, Ark	5.37	26–28, 1893
Denver, Colo	6.70	21–22, 1876	Vicksburg, Miss	5.36	23–24, 1872
Forrest, Ark	6.70	26–28, 1893	Mount Willing, Ala	5.31	1–2, 1893
Strongsville, Ohio	6.67	16–17, 1893	Egg Harbor City, N. J.	5.29	20–21, 1894
St. Marys, Ga	6.60	27, 1887	Stanardsville, Va	5.27	2–3, 1893
Petersburg, Pa	6.60	31, 1889	Malvern, Ark	5.26	* 1894
Hallettsville, Tex	6.54	15, 1892	Gold Hill, Colo	5.25	30–31, 1894
Boerne, Tex	6.52	28, 1880	Quincy, Ill	5.25	25–26, 1893
Lynnville, Tenn	6.51	31, 1893	Frederick, Md	5.25	31, 1889
Charleston, S. C	6.38	1–2, 1883	Galveston, Tex	5.24	27–28, 1874
Little Rock, Ark	6.33	9–10, 1882	Dale Enterprise, Va	5.24	30–31, 1889
Tallahassee, Fla	6.30	20, 1888	Luling, La	5.20	24, 1890
Bolar, Va	6.25	30–31, 1889	Eagles Mere, Pa	5.17	31, 1889
Bee Branch, Ark	6.25	27–28, 1893	Fort Snelling, Minn.	5.12	31, 1877
Bissells, Ohio	6.23	16–17, 1893	Anderson, S. C	5.12	19, 1886
Grand Coteau, La	6.20	1, 1893	Helena, Ark	5.12	10, 1882
Harrisburg, Pa	6.16	31, 1889	Hollidaysburg, Pa	5.12	31, 1889
Fort Randall, S. Dak.	6.13	15, 1872	Franklin, Ky	5.12	31, 1893
North Royalton, Ohio	6.12	17–18, 1893	New Hartford, Mo	5.11	25–26, 1893
Holly Springs, Miss	6.10	26–28, 1893	Eureka Ranch, Kans	5.10	2, 1894
Live Oak, Fla	6.08	4–5, 1890	Franklinville, N. J	5.10	20–21, 1894
Wauseon, Ohio	6.04	29–30, 1889	Centerville, Mo	5.10	13–14, 1892
Weldon, N. C	6.03	10, 1887	Fort Hancock, Tex	5.09	11–12, 1893
Simpsonville, S. C	6.02	25–26, 1890	Atwood, Ill	5.08	25–26, 1893
Glenwood, Iowa	6.00	29, 1878	Lumberton, N. C	5.07	26–27, 1890
West Almond, N. Y.	6.00	31, 1889	Hamburg, Pa	5.07	20–21, 1894
Selins Grove, Pa	6.00	31, 1889	Caddo Peak, Tex	5.05	1, 1890
Steffenville, Mo	6.00	25–26, 1893	Ellinwood, Kans	5.03	17–18, 1877
Quakertown, Pa	5.94	20–21, 1894	Nunnelly, Tenn	5.02	31, 1893
Greenville, Ala	5.85	30, 1885	Council Bluffs, Iowa	5.00	31, 1875
Geneva, Nebr	5.85	30–31, 1893	Emory Grove, Md	5.00	15, 1879
Emporium, Pa	5.85	31, 1889	Fort Niobrara, Nebr	5.00	26, 1888
Moorestown, N. J	5.81	20–21, 1894	Palestine, Tex	5.00	2–3, 1884
Tuscarora, Pa	5.81	30–31, 1889	Santee, Nebr	5.00	27, 1875
Waynesboro, Miss. *a*	5.80	6, 1893	Columbia, La	5.00	13, 1890
Girardville, Pa	5.76	20–21, 1894	St. Cloud, Minn	5.00	15–16, 1894

Exceptional precipitation for one hour or less.

Station and state.	Amount.	Time.	Date.
	Inches.	*h. m.*	
Indianapolis, Ind	0.55	0 05	31, 1892
Jacksonville, Fla	0.50	0 05	24, 1893
Jupiter, Fla	0.50	0 05	7, 1891
Detroit, Mich	0.48	0 05	16, 1889
Dodge City, Kans	0.47	0 05	30, 1892
Vicksburg, Miss	0.45	0 05	11, 1894
Jupiter, Fla	0.45	0 05	30, 1893
Kansas City, Mo	0.45	0 05	5, 1892
Galveston, Tex	0.43	0 05	5, 1890
Indianapolis, Ind	0.42	0 05	10, 1894
St. Paul, Minn	0.40	0 05	15, 1894
Norfolk, Va	0.37	0 05	21, 1892
Chicago, Ill	0.37	0 05	1, 1894
Key West, Fla	0.35	0 05	27, 1894
Jupiter, Fla	0.35	0 05	4, 1890
Savannah, Ga	0.35	0 05	27, 1891
Do	0.35	0 05	3, 1890
Cleveland, Ohio	0.32	0 05	31, 1893
Do	0.32	0 05	1, 1892
Nashville, Tenn	0.32	0 05	10, 1894
New Orleans, La	0.30	0 05	19, 1890
Jupiter, Fla	0.30	0 05	31, 1892
Memphis, Tenn	0.30	0 05	27, 1893
Do	0.30	0 05	31, 1893
Tampa, Fla	0.30	0 05	16, 1893
Kansas City, Mo	0.30	0 05	13, 1891

Exceptional precipitation for one hour or less—Continued.

Station and state.	Amount.	Time.	Date.
	Inches.	*h. m.*	
Memphis, Tenn	0.30	0 05	9, 1892
San Francisco, Cal	0.30	0 05	5, 1889
Norfolk, Va	0.30	0 05	23, 1894
Philadelphia, Pa	0.30	0 05	28, 1894
Chicago, Ill	0.28	0 05	31, 1892
St. Louis, Mo	0.28	0 05	26, 1893
Jacksonville, Fla	0.27	0 05	25, 1893
Norfolk, Va	0.27	0 05	26, 1891
Cleveland, Ohio	0.26	0 05	18, 1894
Detroit, Mich	0.25	0 05	5, 1892
St. Louis, Mo	0.25	0 05	18, 1890
Washington, D. C	0.25	0 05	31, 1889
Baltimore, Md	0.25	0 05	6, 1894
Detroit, Mich	0.25	0 05	27, 1894
Memphis, Tenn	0.25	0 05	7, 1894
Norfolk, Va	0.25	0 05	27, 1893
Omaha, Nebr	0.25	0 05	10, 1893
Forestburg, Tex	1.41	0 10	5, 1892
Mount Ida, Ark	1.20	0 10	10, 1882
Vicksburg, Miss	0.85	0 10	11, 1894
Key West, Fla	0.65	0 10	27, 1894
St. Paul, Minn	0.65	0 10	15, 1894
Indianapolis, Ind	0.53	0 10	10, 1894
Davenport, Iowa	0.50	0 10	3, 1888
Oklahoma City, Okla	1.75	0 15	20, 1891
Coatesville, Pa	1.24	0 15	11, 1891
Nunnelly, Tenn	1.24	0 15	14, 1894
Jupiter, Fla	1.15	0 15	30, 1893
Toledo, Ohio	1.10	0 15	20, 1880
La Crosse, Wis	1.04	0 15	3, 1888
Charlotte, N. C	1.32	0 16	12, 1891
Charleston, S. C	1.08	0 17	12, 1883
Cumberland, Md. *a*	1.69	0 20	25, 1890
Mobile, Ala	1.64	0 20	5, 1879
Fort Riley, Kans	1.50	0 20	14, 1885
Duval, Tex	1.30	0 20	11, 1894
Cincinnati, Ohio	1.14	0 20	14, 1891
Charlotte, N. C	1.00	0 20	3, 1893
New Palestine, Mo	1.00	0 20	9, 1894
Philadelphia, Pa	1.00	0 20	20, 1889
Savannah, Ga	1.60	0 22	26, 1890
Charlotte, N. C	1.60	0 22	26, 1890
Palestine, Tex	1.17	0 23	24, 1888
Concordia, Kans	1.32	0 24	30, 1893
Dayton, Ohio *a*	1.84	0 28	15, 1894
Abilene, Tex	1.62	0 28	31, 1894
College Hill, Ohio	2.38	0 30	27, 1888
Marshall, Mo	2.08	0 30	29, 1892
Houma, La	2.00	0 30	15, 1894
Mountain Spring, Tex	2.00	0 30	31, 1889
Ashland, Ohio	1.89	0 30	17, 1894
Smithfield, Va	1.80	0 30	31, 1892
Shields, Kans	1.75	0 30	30, 1893
Concordia, Kans	1.50	0 30	30, 1894
Plant City, Fla	1.90	0 35	9, 1893
Cumberland, Md. *b*	1.75	0 38	25, 1890
Alexandria, S. Dak	3.15	0 45	21, 1893
Fort Riley, Kans	2.70	0 45	13, 1885
Bird Island, Minn	2.25	0 45	4, 1894
Austin, Tex	2.50	0 48	7, 1884
Hot Springs, Ark	3.00	0 50	18, 1891
McCausland, Iowa	3.90	1 00	22, 1890
Rio Grande City, Tex	3.75	1 00	29, 1885
Bolar, Va	3.00	1 00	24, 1890

MONTHLY SNOWFALL.

The depth of snow that fell during the month of May, as reported by both regular and voluntary observers, was not sufficient to necessitate the publication of the usual snow chart, No. V, which is therefore omitted. On the other hand, the actual depth of snowfall and the quantity lying on the ground, as reported at voluntary stations, is shown in the following table. It will be seen that there have been seven principal areas of snowfall, viz:

1. East Kentucky, east Tennessee, and the southern portion of West Virginia, in which region the snowfall ranged from 0.5 to 6.0.

2. Northern Michigan, southeast Wisconsin, and the western portion of southern Wisconsin, in which the snowfall ranged from a trace to 8.0.

3. Central Colorado, in which the snowfall was 0 in the valleys, but was 94 on Pikes Peak.

4. Central Utah, where a few stations report snowfall, the maximum being 10 at Silver Lake.

5. The southwestern portion of Montana, where the maximum snowfall was 16 at Cokedale.

6. Southern California, especially the San Bernardino range of mountains, where the maximum snowfall reported was 5.0.

7. Northeastern California, especially the Sierra Nevada in the neighborhood of Lake Tahoe, where the maximum snowfall reported was 26 at Cisco and 24 at Summit.

Monthly snowfall and amounts on ground on the 15th and at close of month.

State and station.	Total.	15th.	31st.
Arkansas.	*Inches.*	*Ins.*	*Ins.*
Corning	T.	.....	.....
California.			
Adin	1.0	0.0	0.0
Cisco	26.0	0.0	0.0
Deep Creek	3.0	0.0	0.0
Edinanton	3.0	3.0	0.0
Emigrant Gap	16.0	0.0	0.0
Girard	1.0	0.0	0.0
Green Valley	3.0	0.0	0.0
Iowa Hill	T.	0.0	0.0
La Porte	8.0	14.0	0.0
Lick Observatory	4.0	0.0	0.0
Little Bear Valley	3.0	0.0	0.0
Little Bear V'y (near)	3.2	0.0	0.0
Lower Holcomb Valley	1.5	0.0	0.0
Morses House	5.0	0.0	0.0
Nevada City	1.5	1.5	0.0
Squirrel Inn	2.5	0.0	0.0
Summit	24.0	0.0	0.0
Susanville	T.	0.0	0.0
Tehachapi *b*	2.5	0.0	0.0
Colorado.			
Breckenridge	12.9	30.0	30.0
Climax	3.0	0.0	0.0
Coma (near)	9.3	0.0	0.0
Deer Trail	T.	0.0	0.0
Divide Ex. Station	1.0	0.0	0.0
Dumont	4.0	0.0	0.0
Gold Hill	15.2	0.0	0.0
Husted	T.	0.0	0.0
Moraine	12.0	0.0	0.0
Pikes Peak	94.2	T.	60.0
Rico	2.1	0.0	0.0
Smoky Hill Mine	6.0	0.0	0.0
Stamford	8.5	0.0	0.0
Steamboat Springs	T.	0.0	0.0
Sunnyside	33.9	0.0	0.0
Idaho.			
Atlanta	3.0	36.0	0.0
Grangeville	2.5	0.0	0.0
Idaho Falls	T.	0.0	0.0
Salubria	T.	0.0	0.0
Illinois.			
Chicago	T.	0.0	0.0
Griggsville	T.	0.0	0.0
Rantoul	T.	0.0	0.0
Riley	T.	0.0	0.0
Winnebago	1.0	0.0	0.0
Indiana.			
Angola	0.5	0.0	0.0
Huntington	T.	0.0	0.0
Indianapolis	T.	0.0	0.0
Jeffersonville	T.	0.0	0.0
Kokomo	T.	0.0	0.0
Marengo	T.	0.0	0.0
Marion	T.	0.0	0.0
Markle	1.5	0.0	0.0
Mauzy	T.	0.0	0.0
Nevay	T.	0.0	0.0
Iowa.			
Dubuque	T.	0.0	0.0
Kentucky.			
Burnside	3.0	0.0	0.0
Carrollton	T.	0.0	0.0
Eubank	3.0	0.0	0.0
Greendale	3.5	0.0	0.0
Harrodsburg	6.0	0.0	0.0
Hendricks	1.0	0.0	0.0
Lexington	6.0	0.0	0.0
Louisa	T.	0.0	0.0
Louisville	T.	0.0	0.0
Middlesboro	T.	0.0	0.0
Richmond	4.0	0.0	0.0
Sandy Hook	2.0	0.0	0.0
Shelby City	3.0	0.0	0.0
Shelbyville	4.0	0.0	0.0
South Fork	5.0	0.0	0.0
Springfield	5.0	0.0	0.0
Williamsburg	0.4	0.0	0.0
Maine.			
Houlton	T.	0.0	0.0
Michigan.			
Albion	T.	0.0	0.0
Allegan	T.	0.0	0.0
Alma	T.	0.0	0.0
Alpena	5.0	0.0	0.0
Ann Arbor	T.	0.0	0.0
Arbela	T.	0.0	0.0
Bear Lake	1.0	0.0	9.0
Berlin	0.5	0.0	0.0
Boon	4.0	0.0	0.0
Calumet	1.0	0.0	0.0
Escanaba	T.	0.0	0.0
Fitchburg	1.5	0.0	0.0
Flint	T.	0.0	0.0
Grand Haven	0.2	0.0	0.0
Grayling	8.0	0.0	0.0
Hanover	T.	0.0	0.0
Harbor Springs	T.	0.0	0.0
Harrison	3.0	0.0	0.0
Harrisville	T.	0.0	0.0
Hart	0.5	0.0	0.0

State and station.	Total.	15th.	31st.
Michigan—Cont'd.	*Inches.*	*Ins.*	*Ins.*
Kalamazoo	T.	0.0	0.0
Lansing	T.	0.0	0.0
Lathrop	1.0	0.0	0.0
Lewiston	7.0	0.0	0.0
Lodi	2.0	0.0	0.0
Marquette	4.2	0.0	0.0
Mottville	T.	0.0	0.0
Old Mission	7.0	0.0	0.0
Olivet	T.	0.0	0.0
Parkville	T.	0.0	0.0
Rawsonville	T.	0.0	0.0
Rockland	1.0	0.0	0.0
St. Ignace	T.	0.0	0.0
Stanton	T.	0.0	0.0
Thornville	T.	0.0	0.0
Ypsilanti	T.	0.0	0.0
Missouri.			
Princeton	T.	0.0	0.0
Montana.			
Butte	1.0	0.0	0.0
Cokedale	16.0	2.0	0.0
Fort Custer	0.3	0.0	0.0
Fort Logan	12.0	2.0	0.0
Havre	T.	0.0	0.0
Helena	T.	0.0	0.0
Marysville	5.4	0.0	0.0
Red Lodge	0.2	0.0	0.0
Virginia City	3.5	0.0	0.0
White Sulphur Springs	7.0	0.0	0.0
Nevada.			
Austin	12.0	0.0	0.0
Battle Mountain	12.0	2.0	0.0
Belleville	0.6	0.6	0.0
Belmont	1.0	1.0	0.0
Candelaria	3.0	3.0	0.0
Ely	T.	T.	0.0
Lewers Ranch	0.2	0.2	0.0
Palmetto	6.0	6.0	0.0
Paradise	T.	T.	0.0
Sunnyside	3.0	3.0	0.0
Tybo	0.5	0.5	0.0
Virginia City	1.5	0.0	0.0
Winnemucca	0.5	0.0	0.0
New Jersey.			
Asbury Park	T.	0.0	0.0
Boonton	T.	0.0	0.0
New York.			
Buffalo	T.	0.0	0.0
Humphrey	T.	0.0	0.0
Rome	0.5	0.0	0.0
North Carolina.			
Asheville	T.	0.0	0.0
Bakersville	T.	0.0	0.0
Blowing Rock	T.	0.0	0.0
Columbus	T.	0.0	0.0
Horse Cove	T.	0.0	0.0
North Dakota.			
McKinney	0.1	0.0	0.0
Williston	2.0	0.0	0.0
Ohio.			
Benton Ridge	T.	0.0	0.0
Cherry Fork	0.3	0.0	0.0
Clarksville	T.	0.0	0.0
Cincinnati	T.	0.0	0.0
Cynthiana	T.	0.0	0.0
Findlay	T.	0.0	0.0
Jacksonboro	T.	0.0	0.0
Montpelier	T.	0.0	0.0
New Bremen	T.	0.0	0.0
New Holland	T.	0.0	0.0
Orangeville	T.	0.0	0.0
Ripley	2.0	0.0	0.0
Vanceburg	3.0	0.0	0.0
Van Wert	T.	0.0	0.0
Wauseon	0.4	0.0	0.0
Oregon.			
Baker City	T.	0.0	0.0
Crook	2.0	0.0	0.0
Fife	2.0	2.0	0.0
Happy Valley	3.3	0.0	0.0
Siskiyou	7.0	0.0	0.0
Pennsylvania.			
Cassandra	T.	0.0	0.0
Le Roy	T.	0.0	0.0
South Dakota.			
Fort Meade	T.	0.0	0.0
Tennessee.			
Andersonville	2.0	0.0	0.0
Covington *a*	T.	0.0	0.0
Franklin	T.	0.0	0.0
Greeneville	T.	0.0	0.0
Jacksboro	T.	0.0	0.0
Knoxville	T.	0.0	0.0
Nashville	T.	0.0	0.0
Pikeville	1.0	0.0	0.0
Rugby	2.0	0.0	0.0
Springdale	T.	0.0	0.0
Utah.			
Coalville	1.0	0.0	0.0
Glendale	1.0	0.0	0.0
Levan	T.	0.0	0.0
Mount Pleasant	1.0	0.0	0.0

Snowfall of 10 *inches or more*—Continued.

State and station.	Total.	15th.	31st.
Utah—Cont'd.	*Inches.*	*Ins.*	*Ins.*
Scofield	1.0	0.0	0.0
Silver Lake	10.0	30.0	0.0
Singletree	0.5	0.5	0.0
Virginia.			
Marion	T.	0.0	0.0
Washington.			
Silver Creek	T.	0.0	0.0
Spokane	T.	0.0	0.0
West Virginia.			
Beverly	T.	0.0	0.0
Bluefield	2.0	0.0	0.0
Elkhorn	T.	0.0	0.0
Madison	T.	0.0	0.0
Raleigh	0.5	0.0	0.0
Wisconsin.			
Antigo	T.	0.0	0.0
Beaver Dam	2.0	0.0	0.0
Delevan	T.	0.0	0.0
Wisconsin—Cont'd.	*Inches.*	*Ins.*	*Ins.*
Fond du Lac	1.0	0.0	0.0
Green Bay	T.	0.0	0.0
Harvey	0.2	0.0	0.0
Hillsboro	0.2	0.0	0.0
Juneau	2.0	0.0	0.0
Lincoln	0.2	0.0	0.0
Madison	T.	0.0	0.0
Manitowoc	2.0	0.0	0.0
Milwaukee	T.	0.0	0.0
Reedsburg	1.0	0.0	0.0
Sharon	T.	0.0	0.0
Shawano	1.0	0.0	0.0
Wyoming.			
Big Horn Ranch	1.1	0.0	0.0
Camp Pilot Butte	T.	0.0	0.0
Cheyenne	T.	0.0	0.0
Fort Yellowstone	7.2	0.0	0.0

DEPTH OF SNOW ON GROUND.

The depth of unmelted snow lying on the ground at 8 p. m. of May 31st was too small and irregularly distributed to warrant the publication of a special chart, but the depth is given in figures in connection with the monthly snowfall given in the preceding table. On the 31st the following places only reported snow lying on the ground:

Colorado.—Breckenridge, 30 inches; Pikes Peak, 60 inches.

HAIL.

The description of the more severe hailstorms of the month is given under "Local storms." The following are the dates on which hail fell in the respective States:

Alabama, 7, 8, 10, 11, 18. Arizona, 29. Arkansas, 1, 3, 7, 8, 26, 27. California, 14, 18, 26, 31. Colorado, 3, 9, 11, 22, 23, 25, 26, 29, 30, 31. Delaware, 24, 27. 28. District of Columbia, 18. Florida, 10, 26, 30, 31. Georgia, 7, 10, 16, 18, 25, 26. Idaho, 1, 12, 17, 26. Illinois, 1, 5, 6, 7, 8, 10, 13, 16, 17, 18, 20, 24, 25, 27. Indiana, 3, 4, 6, 7, 10, 14, 15, 17, 19, 20, 25, 26, 27. Indian Territory, 8, 15. Iowa, 1, 2, 3, 4, 5, 6, 11, 19, 24, 28. Kansas, 2, 4, 8, 9, 13, 27, 28, 29, 30. Kentucky, 6, 7, 11, 13, 14, 15, 19, 26, 27, 31. Louisiana, 11, 14, 15, 18, 24. Maine, 7. Maryland, 6, 17, 18, 24, 26, 31. Massachusetts, 4, 19. Michigan, 1, 6, 10, 14, 16, 17, 18, 24, 26, 27, 29, 30, 31. Minnesota, 2, 4, 5, 6, 9, 10, 13, 14, 15, 16, 17, 26. Mississippi, 2, 11, 18. Missouri, 2, 3. 4, 5, 6, 7, 9, 10, 16, 17, 18, 25, 26, 27, 29. Montana, 13, 14, 20, 21, 27, 28, 29.

Nebraska, 2, 5, 8, 9, 12, 29. Nevada, 8, 14, 15, 18, 31. New Hampshire, 7. New Jersey, 6, 7, 17, 26, 28. New Mexico, 23, 25, 29, 30, 31. New York, 6, 7, 18, 21, 27, 30, 31. North Carolina, 2, 4, 5, 7, 18, 19, 23, 26, 27, 28, 29, 30, 31. North Dakota, 5, 6, 9, 10, 16. Ohio, 6, 10, 14, 15, 16, 17, 18, 21, 23, 24, 25, 26, 27, 29, 30, 31. Oklahoma, 3, 7, 25. Oregon, 1, 24, 25, 26, 27, 30. Pennsylvania, 5, 6, 16, 17, 18, 19, 20, 23, 26, 28, 31. South Carolina, 5, 7, 9, 16, 17, 18, 23, 30. South Dakota, 1, 5, 16. Tennessee, 3, 4, 7, 9, 10, 14, 18. Texas, 2, 5, 8, 9, 23, 24, 26, 28, 30. Utah, 8, 9, 21, 29, 30. Vermont, 29. Virginia, 4, 5, 6, 10, 13, 16, 18, 23, 24, 25, 26, 27, 28. West Virginia, 5, 6, 18, 232, 4, 26, 28, 29, 31. Wisconsin, 1, 2, 5, 6, 13, 14, 15, 16, 17, 26.

SLEET.

A description of the more severe sleetstorms of the month is given under "Local storms." The following are the dates on which sleet occurred in the respective States:

California, 15. Colorado, 23, 30. Georgia, 19. Illinois, 20. Indiana and Kentucky, 19, 20. Michigan, 18, 19, 27, 29, 30. Minnesota, 6. Montana, 6, 9, 15. Nevada, 14, 15. North Dakota, 2. Ohio, 18, 19. Tennessee, 19. Utah, 15. Virginia and West Virginia, 19. Wisconsin, 17, 18.

PRECIPITATION AS AFFECTING AGRICULTURE.

The following records of precipitation as affecting agriculture are taken from newspapers and official reports of the State Weather Services:

Alabama.—The month as a whole was rather dry, and while a dry May has never been known to inflict any serious injury on crops in this section, the high winds that prevailed during the latter half of the month baked the ground very hard, retarding farming operations.

Arkansas.—The deficiency of rainfall was very favorable for cultivating and cleaning crops, but was rather detrimental to the growth of vegetables and grasses, and in a great many localities was so injurious to oats that they were entirely ruined, the straw being too short and the grain too light to pay for harvesting. At the close of the month cotton, corn, and wheat were generally doing very well and promising a good crop.

Georgia.—Owing to the long period of deficient rainfall, the soil has become very dry and crops are beginning to suffer in many localities.

Indiana.—The latter part of the month cold rains checked the advancement of the crops. At Patriot a violent hailstorm destroyed all vegetation; it fell three inches deep.

Iowa.—The most damaging condition as regards the crops has been the unprecedented drought prevalent through the greater part of May.

Louisiana.—Where rain fell crop conditions are reported very favorably, cane, corn, cotton, and rice were greatly benefited thereby, and the planting of sweet potato slips was made possible.

Michigan.—General and heavy rains occurred at the beginning of the month and continued until after the 20th, keeping the ground well soaked for more than three weeks. Such weather was favorable to the growth of wheat, and the average condition June 1 is reported as 92 per cent as compared with 77 in 1893, 91 in 1892, and 96 in 1891. The average condition this year is higher than in any previous year of which we have record, excepting 1891. The heavy and continued rains interfered with the planting of corn, and a much larger area than usual remained to be planted June 1, and of that planted early more than an average amount had to be replanted. The reports indicate, however, that the acreage of this crop will not be less than in average years.

Missouri.—In the northwestern portion of the State the month was unusually dry, stock water became scarce, wells and cisterns failed in some localities, pastures and meadows dried up, and all crops suffered to a greater or less extent from the drought.

Nebraska.—Drought has prevailed over most of the State, and crops of all kinds have suffered therefrom.

Nevada.—At the close of the month some portions of Nye County were suffering for want of rain, but in nearly all other localities sufficient rain or snow fell to insure good crops.

New England.—The first half of the month was extremely dry in all districts, and crops and springs suffered, but during the last half an excess of moisture came. The ground was filled with water, making lowlands very wet, and in some instances the crops were under water or in the mud. Much seed rotted in the ground and replanting was necessary.

New Jersey.—Bridgeton: the rainfall from the 18th to the 31st, inclusive (13.74 inches), is the greatest on record at this place; cellars full of water and crops retarded. Dover: vegetation suffered severely from drought up to the 18th, but excessive rains continued from that time.

North Carolina.—During the first warm period the rainfall was insufficient in amount and crops at very many places suffered from drought considerably.

North Dakota.—Power, Richland Co.: the month as a whole has been very dry, though the crops are all growing well. Pasturage fair, but meadows not up to the average. Everything considered, conditions are really good for a better crop than an average.

Oklahoma.—The rains were generally sufficient for agricultural purposes and the month closes with crops in good condition. Arapahoe: plenty of rain and the month closes with the ground in the best possible condition and crops growing fast.

Pennsylvania.—The rainfall was light during the first half of the month, and although general rains occurred on the 5th, 6th, and 7th, the quantity was small, and by the middle of the month, crops were beginning to suffer from want of moisture. General rains occurred on the 17th and 18th, becoming heavy on the 19th and excessive on the 20th and 21st. Agricultural interests suffered severely from the excessive rains of the 21st and 22d; many farms along the rivers and streams were completely inundated, crops washed out, and the land left covered with deposits of mud and foreign matter. Numerous farms not subject to the overflow of streams were badly washed, lowlands flooded, growing crops injured by washouts and washings from hill sides, seeds rotted in the ground from cold and excessive moisture, and farm work delayed by the muddy and saturated condition of the soil. Yorkana, York Co.: Mr. Gerard C. Brown, under date of May 20, says:

"Since the 26 inches of snowfall of April 11–12 we have had five weeks of practically rainless weather, one little shower evening of May 6 to just lay the dust. Results are, that our hay crop is already gone up; clover in blossom, 6 inches high and very scattering. June grass, *poa pratensis*, spindling and maturing. Oats scarcely cover the ground; corn coming up very irregularly; many potato fields planted a month ago do not show the rows; impossible to put tobacco ground in order; gardens watered for past fortnight; all this in the first two weeks of May. Old people here say they have never paralleled it.

"Winds recently are northwest and very parching, although light and baffling, we not only get no showers, but no clouds and yet very little, if any, dews are perceptible in early morning."

South Dakota.—From the 7th to 31st the rainfall is insufficient generally, except in the Black Hills region, and affected crops adversely, but not very seriously.

Tennessee.—At the close of the month all crops were suffering from the combined effects of dry and cool weather.

Texas.—Cotton was damaged considerably in a few localities in Eastland and Comanche counties by heavy hail on 8th, but the precipitation was generally beneficial to the crop; maize was also slightly damaged by the excessive rain and hail of the 8th; the showers at the close of May were generally beneficial to the oat crop, especially those sown late, and improved the crop considerably.

Utah.—The month was unusually dry; the drought was most severely felt in the southern part of the Territory, where it hindered the growth of crops and dried up the cattle ranges.

Virginia.—While there were numerous local showers during the first half of the month, yet, on account of the deficiency during April, the drought became quite severe over the greater portion of the State, except the extreme northern, so that all growing crops were seriously injured and corn planting delayed until general and heavy rains on the 18th to 20th.

Washington.—The unusually warm weather during the latter part of the month melted the snow in the mountains rapidly, causing serious freshets in nearly all the principal rivers of the State, which have almost completely destroyed the crops planted on the lowlands, but notwithstanding vegetation made good growth.

Wisconsin.—Rainfall largely in excess in the northwest and north-central counties, while southwest and south-central counties show a deficiency. The month proved generally favorable to small grain and not too severe for the life of corn and potatoes.

WIND.

PREVAILING WINDS.

The prevailing winds for May, 1894, viz, those that were recorded most frequently at Weather Bureau stations, are shown in Tables I and VIII; they are not given on Chart II, as has hitherto been the custom, but in lieu thereof the resultant winds are published.

RESULTANT WINDS.

The resultants for the current month, as deduced from the hourly records of winds, by self-registers at about 67 regular Weather Bureau stations, are given in Table VIII. Other resultants, deduced from the personal observations made at 8 a. m. and 8 p. m. at all stations that appear on the morning and evening maps of the Weather Bureau, are given in Table IX. These latter resultants are also shown graphically on Chart II, in connection with the isobars based on the same system of simultaneous observation; the small figure attached to each arrow shows the number of hours that this resultant prevailed, on the assumption that each of the morning and evening observations represents one hour's duration of a wind of average velocity; these figures (or the ratio between them and the total number of observations in this month) indicate the extent to which winds from different directions counterbalance each other. The original north, south, east, and west components, on which these resultants are based, are given in detail in Table IX for convenience in making further studies.

During May the resultant movement from the southwest prevailed in New England, the south Atlantic States, the lower Lakes, Ohio Valley and Tennessee, and the northern plateau region; from the southeast in the western Gulf States and the southern slope region; northerly winds in the upper Lake region and North Dakota; while elsewhere the resultant winds were generally southwest or northwest. The strongest resultants were at Corpus Christi from the southeast, and at San Francisco from the southwest.

HIGH WINDS.

Wind velocities of 50 miles, or more, per hour were reported at regular stations of the Weather Bureau as follows (maximum velocities are averages for 5 minutes; extreme velocities are gusts of shorter duration):

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
		Miles.				*Miles.*	
Amarillo, Tex	4	60	s.	Chicago, Ill	5	52	se.
Do	15	50	s.	Do	18	62	e.
Bismarck, N. Dak.	16	54	ne.	Huron, S. Dak.	11	63	s.
Cheyenne, Wyo.	5	50	nw.	Pikes Peak, Colo	15	77	sw.
Do	16	50	w.	Tatoosh Island, Wash.	18	50	e.
Chicago, Ill.	1	60	sw.	Do	23	57	ne.
Do	3	62	sw.	Williston, N. Dak	14	52	w.

LOCAL STORMS.

1st.—About 9.10 p. m. a windstorm of short duration passed over the eastern portion of Toledo, Ohio, causing damage to the amount of about $500. At Waukesha, Wis., a severe windstorm blew down barns.

2d.—A thunderstorm moving northeast occurred at Eastport, Me., between 2.27 and 4.50 p. m.; the tower of the public library was struck by lightning and slightly damaged. In Winston County, Miss., a horse was killed by lightning. At 5.45 p. m. a violent local storm, with a funnel-shaped cloud, moved northeast over Ebson, Kans., in a path about 1 mile wide, injuring 1 person and destroying property valued at $4,000. An exceptionally heavy rain and hail storm visited Eureka Ranch, Kans., about 4.30 p. m., and continued until 9.30 p. m.; gardens and fruit were damaged.

3d.—During a windstorm at Franklin, Ky., in the evening, damage was caused to buildings. At Cincinnati, Ohio, a house was destroyed by lightning. A thunderstorm of short duration passed over Chicago, Ill., about 4.13 p. m.; a house was blown down killing one person.

4th.—Thunder and hail storms caused damage in Missouri and Kansas. At Half Way, Mo., a horse was killed by lightning. In the north part of Coffey County, Kans., damage was caused by hail. A heavy hailstorm was reported at Gordon, Douglas Co., Wis., destroying gardens and glass.

5th.—At Lancaster, Pa., a house was struck by lightning. A man was killed by lightning at Columbus, N. C. At Little Mountain, S. C., a number of trees were struck by lightning. At Prosperity, about 7 miles west of Little Mountain, a house was struck by lightning. High winds caused minor damage at Louisville, Ky. Severe storms were reported in Illinois, Wisconsin, Iowa, and Minnesota. At Chicago, Ill., a thunderstorm began at 9.35 p. m., and continued until past midnight; a church was blown down and a house struck by lightning. Three buildings were struck by lightning at Oconomowoc, Wis. At Stevens Point, Wis., a barn was struck by lightning. A hailstorm caused damage to glass and minor damage to crops at Amana, Iowa. Sixteen miles south of Centerville, Iowa, damage was caused by high wind. A severe hailstorm visited Iowa City, Iowa, about 5 p. m.; the stones were about 2 inches in diameter, some having an opaque center, apparently of snow, and others like transparent layers of ice; the damage was estimated at $25,000. About 6.30 p. m. a severe local storm, moving east, passed about 4 miles southwest of Moravia, Iowa, in a path 100 to 300 yards wide; one person was killed and property demolished. The storm passed about one-fourth of a mile north of Bloomfield, Iowa, where the path was about 14 miles wide; at this point a funnel-shaped cloud was observed; one person was killed, and the estimated damage placed at $25,000. A severe storm, with a funnel-shaped cloud, occurred about 3½ miles south of Foreston, Minn., at 3 p. m.; as the storm passed through an uninhabited part of the country no damage was caused, except to timber.

6th.—Thunder and wind storms occurred in the middle Atlantic States and the Ohio Valley and Tennessee. In Pennsylvania the storms were very severe, and considerable damage was done to property and crops. At Bachmans Val-